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EXAMINER	
SYED, FARHAN M	

ART UNIT	PAPER NUMBER
2165	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/728,721	WAKEFIELD ET AL.	
	Examiner	Art Unit	
	Farhan M. Syed	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5-17,20-33 and 36-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5-17,20-33 and 36-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/24/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 2, 5-17, 20-33, and 36-47 are pending.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04 September 2007 has been entered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, 5-17, 20-33, and 36-47 are rejected under 35 U.S.C. 103(a) as being anticipated by Lemus (U.S. Patent Publication No. 2002/0156817 A1) in view of Budzinski (U.S. Patent 5,715,468).

As per claims 1, 17, and 33, Lemus teaches a computer program product located to one or more storage media devices usable to perform integration of mixed format data (i.e. *"A system and method for generating structured data from unstructured or semi-structured data uses context-based natural language interpreters." "The systems and methods of the present invention can be used to extract information from text, and particularly from unstructured or short semi-structured messages, such as from email, pagers, or other communication devices."* The preceding text clearly indicates that a mixed format data are structured data from unstructured or semi-structured data. One or more storage media devices are pagers and other communication devices.)(Lemus, Abstract; see also paragraph [0007]), said computer program product comprising instructions executable by a computer to perform the functions of: accessing a database of data records, at least some of the data records containing both structured data and unstructured data (i.e. *"The system and method of the present invention have a number of aspects, including a system for receiving information in semi-structured or unstructured form from emails, pagers, and other communication methods, and converting that information into a structured form that can be usable in a database. The system and method also include methods for converting semi-structured data or unstructured data into a structured form suitable for use in a database. These methods can include the steps and processes described below or a subset of those steps and processes."* The preceding text clearly indicates that the prior art contains a database, where accessing a database of structured data is receiving information into a structured form that can be usable in a database. That is the process of receiving information encompasses accessing, because in order to receive information, one must access it. Furthermore, email messages are exemplified by the prior art to illustrate data records containing both structured data and unstructured data, where in an email message, there is a "To:" and "From:" field that clearly are structured fields and a "Body" that contains free text (i.e. unstructured data), all which are stored in a database. That is an email message is a semi-structured data that exemplifies the use of both structured data AND unstructured data.)(Page 1, paragraph [0009]; see also paragraphs [0014], [0016], [0029], and [0061]);

the unstructured data of a particular data record including free text related to the structured data of that data record (i.e. *"A piece of text could contain one or more pieces of such semi-structured data. For instance, an email could detail, on separate lines, two rental availabilities. Each description of a rental availability would represent one piece of semi-structured data."* The preceding text clearly illustrates that the email contains unstructured data, which are exemplified by separate lines that detail two rental availabilities.)(See also paragraphs [0016], [0029], and [0061]); using linguistic characteristics of the free text to extract relational facts from the free text, wherein the linguistic characteristics including at least syntactic roles, (i.e. *"The systems and methods of the present invention can be used to extract information from text, and particularly from unstructured or short semi-structured messages, such as from email, pagers, or other communication devices." "For instance a field might consist of the data 123 456 7890, with that type of information being 'telephone number'"* The preceding text clearly indicates that linguistic characteristics of free text is illustrated by '123 456 7890' and the relational facts extracted from it is that it exemplifies a 'telephone number.')(Page 1, paragraph [0007], [0013]), producing a set of construed data reflecting at least one relational fact conveyed in the free text; relating each construed datum being relatable to the structured data of the same data record (i.e. *"Text pre-filtering attempts to perform data cleaning and massaging. The actual mechanisms used are dependent on the context. Atomization is the process of splitting a given piece of text with white spaces to get a list of the individual words."* The process of atomization is producing a set of construed data reflecting at least one relational fact conveyed in the free text, where the atomization splits the given piece of text (i.e. free text) and extracting relational facts from it (i.e. telephone number, name, etc.) as addressed in the earlier limitation above.)(Page 3, paragraph [0031]); integrating the construed data with the particular structured data (i.e. *"The resulting structured data can be used to create relational database records."* The preceding text clearly indicates that the integrating the construed data is the creation of the relational database record that contains

structured data.)(Lemus, Abstract); and rendering at least one visual representation of the integrated data (i.e. interface, 24, in figure 2.)(Figure 2).

Lemus does not explicitly teach the method wherein the linguistic characteristics including at least syntactic roles.

Budzinski teaches the method wherein the linguistic characteristics including at least syntactic roles (see Figure 1, element 11 and at least Abstract and column 26, "Syntactic Processing Method").

As per claim 2, Lemus teaches a computer program product wherein said extracting step uses caseframes (i.e. *"The system and method also include methods for converting semi-structured data or unstructured data into a structured form suitable for use in a database. These methods can include the steps and processes described below or a subset of those steps and processes."*)(Page 1, paragraph [0009]).

As per claims 5, 21, and 37, Lemus teaches a computer program product wherein said instructions are further executable to perform the function of producing a new database containing the integrated data produced by said integrating (i.e. *"Referring to FIG. 2, the system of the present invention can be implemented on one or more special purpose or general purpose computers 20, appropriately configured and/or programmed, and coupled to a database 22. The system includes an interface 24 to the means from which messages are received, such as over wireless application protocol (WAP), short message service (SMS), email 26, pager 28, document 30, or voice recognition system 32; and an interface 34 to database 22 into which the data is stored in fields. The input can be in text or in a publicly available proprietary form, such as a word processor or PDF*

document. The data in the database can then be used for searching, report generation, business process management, or other uses.")(Page 3, paragraph [0061]).

As per claims 6, 22, and 38, Lemus teaches a computer program product wherein said instructions are further executable to perform the function of inserting the produced data into the database of structured data while performing said integrating the produced data (i.e. *"The system can thus receive data from one of a number of different sources and convert that data into structured data for use in a database, such as an Oracle or Sybase database. The resulting data can be used for data mining purposes. As a result, data entry can be fast and intuitive and can be flexible over one of a number of different devices. In addition, there is no need for the user to fill in structured fields and no need to learn complex input formats. As a result, there can be a reduction in data inconsistency and a significant elimination of re-keying, while allowing an entity that uses such a system to access and consolidate data that was previously scattered without impact on existing systems."*)(Page 3, paragraph [0063]).

As per claims 7, 23, and 39, Lemus teaches a computer program product wherein said instructions are further executable to perform the function of creating a new database while performing said integrating the produced data (i.e. *"Referring to FIG. 2, the system of the present invention can be implemented on one or more special purpose or general purpose computers 20, appropriately configured and/or programmed, and coupled to a database 22. The system includes an interface 24 to the means from which messages are received, such as over wireless application protocol (WAP), short message service (SMS), email 26, pager 28, document 30, or voice recognition system 32; and an interface 34 to database 22 into which the data is stored in fields. The input can be in text or in a publicly available proprietary form, such as a word processor or PDF*

document. The data in the database can then be used for searching, report generation, business process management, or other uses.")(Page 3, paragraph [0061]).

As per claims 8, 24, and 40, Lemus teaches a computer program product wherein the instructions are further executable to produce a new relational database containing the integrated data produced by said integrating (i.e. *"Referring to FIG. 2, the system of the present invention can be implemented on one or more special purpose or general purpose computers 20, appropriately configured and/or programmed, and coupled to a database 22. The system includes an interface 24 to the means from which messages are received, such as over wireless application protocol (WAP), short message service (SMS), email 26, pager 28, document 30, or voice recognition system 32; and an interface 34 to database 22 into which the data is stored in fields. The input can be in text or in a publicly available proprietary form, such as a word processor or PDF document. The data in the database can then be used for searching, report generation, business process management, or other uses." "The system can thus receive data from one of a number of different sources and convert that data into structured data for use in a database, such as an Oracle or Sybase database. The resulting data can be used for data mining purposes. As a result, data entry can be fast and intuitive and can be flexible over one of a number of different devices. In addition, there is no need for the user to fill in structured fields and no need to learn complex input formats. As a result, there can be a reduction in data inconsistency and a significant elimination of re-keying, while allowing an entity that uses such a system to access and consolidate data that was previously scattered without impact on existing systems."*)(Page 3, paragraphs [0061] and [0063]).

As per claims 9, 25, and 41, Lemus teaches a computer program product wherein the instructions are further executable to produce a file containing the integrated data produced by said integrating (i.e. *"Referring to FIG. 2, the system of the present*

invention can be implemented on one or more special purpose or general purpose computers 20, appropriately configured and/or programmed, and coupled to a database 22. The system includes an interface 24 to the means from which messages are received, such as over wireless application protocol (WAP), short message service (SMS), email 26, pager 28, document 30, or voice recognition system 32; and an interface 34 to database 22 into which the data is stored in fields. The input can be in text or in a publicly available proprietary form, such as a word processor or PDF document. The data in the database can then be used for searching, report generation, business process management, or other uses.")(Page 3, paragraph [0061]).

As per claims 10, 26, and 42, Lemus teaches a computer program product wherein the instructions are further executable to produce a file having a format selected from the group of XML, character separated values, spreadsheet formats and file-based database structures (i.e. *"Data is defined to be a string of symbols, which may be chosen, for example, from the UNICODE character set. In the preferred embodiment the symbols are strings in the language Perl and are semi-structured, although the present invention could work with unstructured data. The term semi-structured data (SSD) is used in the manner described in the article entitled "Learning Information Extraction Rules for Semi-structured and Free Text," by Stephen Soderland, Machine Learning, 1-44 (this definition is followed rather than the definition used by the database community, which refers to this as "structured text"). SSD is generally somewhere between data in a rigidly specified grammar (such as XML or HTML) and free text in languages such as English. Typically SSD possesses almost no grammar, and is very telegraphic in style. Examples of SSD may be drawn from classified advertisements in newspapers, such as: 1 Earl's Court, SW5, the rent is $40 per week. " "Referring to FIG. 2, the system of the present invention can be implemented on one or more special purpose or general purpose computers 20, appropriately configured and/or programmed, and coupled to a database 22. The system includes an interface 24 to the means from which messages are received, such as over wireless application protocol (WAP), short message service (SMS), email 26,*

pager 28, document 30, or voice recognition system 32; and an interface 34 to database 22 into which the data is stored in fields. The input can be in text or in a publicly available proprietary form, such as a word processor or PDF document. The data in the database can then be used for searching, report generation, business process management, or other uses.")(Page 1, paragraph [0014], [0061]).

As per claims 11 and 27, Lemus teaches a computer program product further comprising: a processing unit coupled to said one or more storage media devices, said processing unit being capable of executing said instructions (i.e. *"The computer system that implements the steps and processes described above can be or include application specific integrated circuits (ASICs) or can include one or more personal computers, servers, or other such computational devices or group of devices."*)(page 3, paragraph [0062]); and an execution command unit, whereby operation of said instructions and said processing unit may be commanded or controlled (i.e. *"The system can thus receive data from one of a number of different sources and convert that data into structured data for use in a database, such as an Oracle or Sybase database. The resulting data can be used for data mining purposes. As a result, data entry can be fast and intuitive and can be flexible over one of a number of different devices. In addition, there is no need for the user to fill in structured fields and no need to learn complex input formats. As a result, there can be a reduction in data inconsistency and a significant elimination of re-keying, while allowing an entity that uses such a system to access and consolidate data that was previously scattered without impact on existing systems."*)(page 3, paragraph [0063]).

As per claims 12, 28, and 43, Lemus teaches a computer program product wherein said instructions are further executable to combine similar attributes for the extracted relational facts produced in performing said extracting relational facts from the

free text (i.e. *"Referring to FIG. 2, the system of the present invention can be implemented on one or more special purpose or general purpose computers 20, appropriately configured and/or programmed, and coupled to a database 22. The system includes an interface 24 to the means from which messages are received, such as over wireless application protocol (WAP), short message service (SMS), email 26, pager 28, document 30, or voice recognition system 32; and an interface 34 to database 22 into which the data is stored in fields. The input can be in text or in a publicly available proprietary form, such as a word processor or PDF document. The data in the database can then be used for searching, report generation, business process management, or other uses." "The system can thus receive data from one of a number of different sources and convert that data into structured data for use in a database, such as an Oracle or Sybase database. The resulting data can be used for data mining purposes. As a result, data entry can be fast and intuitive and can be flexible over one of a number of different devices. In addition, there is no need for the user to fill in structured fields and no need to learn complex input formats. As a result, there can be a reduction in data inconsistency and a significant elimination of re-keying, while allowing an entity that uses such a system to access and consolidate data that was previously scattered without impact on existing systems."*)(Page 3, paragraphs [0061] and [0063]).

As per claims 13, 29, and 44, Lemus teaches a computer program product wherein said instructions are further executable to combine similar relation types for the extracted relational facts produced in performing said extracting relational facts from the free text (i.e. *"Referring to FIG. 2, the system of the present invention can be implemented on one or more special purpose or general purpose computers 20, appropriately configured and/or programmed, and coupled to a database 22. The system includes an interface 24 to the means from which messages are received, such as over wireless application protocol (WAP), short message service (SMS), email 26, pager 28, document 30, or voice recognition system 32; and an interface 34 to database 22 into which the data is stored in fields. The input can be in text or in a publicly available proprietary form, such as a word processor or PDF document. The data in the database can then be used for searching, report generation,*

business process management, or other uses." "The system can thus receive data from one of a number of different sources and convert that data into structured data for use in a database, such as an Oracle or Sybase database. The resulting data can be used for data mining purposes. As a result, data entry can be fast and intuitive and can be flexible over one of a number of different devices. In addition, there is no need for the user to fill in structured fields and no need to learn complex input formats. As a result, there can be a reduction in data inconsistency and a significant elimination of re-keying, while allowing an entity that uses such a system to access and consolidate data that was previously scattered without impact on existing systems.")(Page 3, paragraphs [0061] and [0063]).

As per claims 14, 30, and 45, Lemus teaches a computer program product wherein said instructions provide relational facts with domain roles applied in performing said extracting relational facts from the free text (i.e. *"Domain-dependent processing is the manipulation of parts of the semi-structured document that is dependent on the domain of discourse that the information resides in. For example, semantic information peculiar to the domain of discourse may be used to identify terms and present them in a normalized form. If the domain relates to motorcars, this semantic context may identify terms such as "VW" and "Volksy" and represent them both of them as the normal term "Volkswagen." The extraction engine provides facilities to accomplish such manipulations. These manipulations consist of term rewrites that utilize lexicons. The triggering of manipulations often relies on the use of the intelligence services described below."*)(Page 4, paragraph 0073).

As per claims 15, 31, and 46, Lemus teaches a computer program product wherein said instructions store the relational facts produced in performing said extracting relational facts from the free text (i.e. "Text pre-filtering attempts to perform data cleaning and massaging. The actual mechanisms used are dependent on the context. Atomization is the process of splitting a given piece of text with white spaces to get a list of the individual words." "This step

uses a set of pattern matching and replace expressions, which insert white space in correct places, using basic syntactic typing rules. The rules are context dependent, and in the preferred embodiment are stored in a separate database called, for example, "AtomizeRules." The rules can be programmed in Perl or other language that supports regular expressions and string manipulation. A rule is a regular expression that specifies how white space is to be inserted. For instance, the example might contain a regular expression whose purpose is to insert white space before commas and full stops." "In some instances, it is desirable for several words to be treated as a single atom because they represent a single semantic entity. This step handles these cases. A separate database table contains patterns, including white spaces, which are to be replaced with the same words but with the white space replaced with an underscore. In the preferred embodiment, only atoms from the previous stage are used, and are combined into a piece of text again (with only one space between each atom), and apply the expressions found in the database." "The fields of the record corresponding to the context are populated with the classified atoms and/or atom sequences; i.e., a context may include several types of information, such as name, city, and state, and the atoms are classified into those types.")(page 2, paragraphs [0031] and [0039]; page 3, paragraph [0049], [0057]).

As per claims 16, 32, and 47, Lemus teaches a computer program product wherein the extracted relational facts produced in performing said extracting relational facts and the integrated data produced by the performance of said integrating the produced data includes reference information to the original free text (i.e. *"The systems and methods of the present invention can be used to extract information from text, and particularly from unstructured or short semi-structured messages, such as from email, pagers, or other communication devices." "Text pre-filtering attempts to perform data cleaning and massaging. The actual mechanisms used are dependent on the context. Atomization is the process of splitting a given piece of text with white spaces to get a list of the individual words." "This step uses a set of pattern matching and replace expressions, which insert white space in correct places, using basic syntactic typing rules. The rules are*

context dependent, and in the preferred embodiment are stored in a separate database called, for example, "AtomizeRules." The rules can be programmed in Perl or other language that supports regular expressions and string manipulation. A rule is a regular expression that specifies how white space is to be inserted. For instance, the example might contain a regular expression whose purpose is to insert white space before commas and full stops." "In some instances, it is desirable for several words to be treated as a single atom because they represent a single semantic entity. This step handles these cases. A separate database table contains patterns, including white spaces, which are to be replaced with the same words but with the white space replaced with an underscore. In the preferred embodiment, only atoms from the previous stage are used, and are combined into a piece of text again (with only one space between each atom), and apply the expressions found in the database." "The fields of the record corresponding to the context are populated with the classified atoms and/or atom sequences; i.e., a context may include several types of information, such as name, city, and state, and the atoms are classified into those types.")(page 1, paragraph [0007]; page 2, paragraphs [0031] and [0039]; page 3, paragraph [0049], [0057]).

As per claims 20 and 36, Lemus teaches a computer program product wherein said instructions are further executable to perform the function of applying caseframes while performing said interpreting the free text (i.e. *"Initially, the text file is context-classified as an information source for one or several data structures. The context is the surrounding information that identifies the characteristics of the information available in the text file." "Context identification classifies the textual data according to a predefined or user-defined context. Context identification might be made using one or more of the following methods: (1) User classification, (2) Automatic classification via keyword identification, (3) Automatic classification via data-origin or data-destination, and (4) Automatic classification via pattern identification, such as with machine learning techniques."*)(page 2, paragraph [0023] and [0024]).

Response to Remarks/Argument

5. Applicant's arguments with respect to claims 1, 2, 5-17, 20-33, and 36-47 have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farhan M. Syed whose telephone number is 571-272-7191. The examiner can normally be reached on 8:30AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FMS

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